

REQUEST FOR COUNCIL ACTION

SUBJECT: Solid Waste – Hauling Services

SUMMARY: City Manager requested research into the City providing solid waste hauling services to accompany cart maintenance and billing, which the City already provides.

FISCAL AND/OR ASSET IMPACT: Estimates indicate an annual cost savings of \$474,489 in base services with additional savings based upon potential service changes.

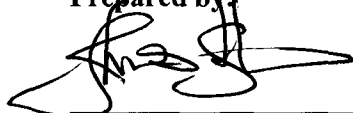
STAFF RECOMMENDATION:

For information only.


MOTION RECOMMENDED:

No motion required. For information only.


Prepared by:


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Reviewed by:


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BACKGROUND DISCUSSION:

Attachments:

City Manager Issue Paper on Solid Waste



Department of Public Works

CITY MANAGER ISSUES PAPER

Subject: Solid Waste		Date: September 21, 2016
Prepared by: Justin Stoker	Page(s): 8	Issue Paper No. 3

1. ISSUE

Staff was asked by the City Manager to investigate the feasibility of a city-run waste hauling, along with the billing and cart services already handled by the City.

2. BACKGROUND

In March 2013, ACE Disposal signed a contract with the City of West Jordan to be able to perform waste hauling services for the City. The contract also has stipulations to provide four eWaste/Shredding events throughout the year. The contract in part also requires that ACE Disposal pay the City of West Jordan \$12,000 annually towards a recycling coordinator and a rebate for recyclable materials.

While the City has the capacity for a limited use 30-yard dumpster program, including the truck, driver, and bins, ACE Disposal has also been contracted to provide drivers for 16 roll-off dumpsters for neighborhood cleanup. This program was expanded by the City Council in February 2015 from 16 roll-off bins to 32 bins. By contract, ACE provides both the bins and the hauling services for the neighborhood dumpster program.

Starting in January 2015, the recyclables market changed and no longer generates the revenue that it historically has. Early in the summer of 2016, ACE Disposal approached the City regarding a modification to their contract to eliminate the \$12,000 annual payment and to remove the rebate for recyclable materials. This item was presented to City Council several times, with the decision on August 10th, to preserve the \$12,000 payment and to eliminate the recyclables rebate moving forward.

Around the beginning of June, City Staff was asked whether the City could provide waste hauling services, to go along with utility billing which the City already provides. City Staff already works alongside ACE Disposal on special eWaste/Shredding events, coordinates customer complaints, schedules dumpsters for the Neighborhood Cleanup program, and owns and replaces the customer garbage carts.

Shortly after the request was made, the City sent two staff members to the WasteExpo conference to receive education and training regarding waste hauling. In addition to training,

contact was made with truck manufacturers, software providers, and other services that assist in the waste hauling industry.

In the time since, staff has contacted Draper City, Provo City, Salt Lake City, and Salt Lake County (running a co-op, doing business as Wasatch Front Waste and Recycling). Research has been done with regards to the trucks, staffing, software, technology, and budget.

3. FINDINGS

Neighbor Comparison

The following table summarizes how the largest cities in Utah handle waste hauling

Salt Lake City	self performed
West Valley City	Waste Management
Provo	self performed
West Jordan	ACE Disposal
Sandy	Waste Management
Orem	Waste Management
Ogden	self performed

As far as can be found, the remaining mid-sized cities in the Salt Lake valley are equally split between the County's Wasatch Front Waste and Recycling, ACE Disposal, and Waste Management.

Technology

Recently technology has become available to provide cameras, route guidance, GPS, missed can reporting, and real-time communication between the home station and each truck. RFID tags on carts and readers on trucks are becoming more popular that allows for a "pay-as-you-throw" type billing system that is gaining popularity. The technology helps reduce risk to the city in terms of driver behavior, potential collisions, pictures at collection sites, and real-time communication for why drivers may miss/skip cans. Route guidance for drivers, and the ability to dynamically adjust routes, accommodates personnel or vehicle needs throughout the day. These services are all designed to reduce risk, increase productivity, and increase customer service. The cost of retrofitting existing trucks with this technology is much more expensive than if it is already incorporated into the trucks at time of construction. It appears that Waste Management is currently the only private hauler that incorporates many of the technology solutions into their program.



Staffing

Staffing needs were reviewed as part of the educational opportunities at WasteExpo and with consultation with other various local agencies. It is a general industry consensus that a new hauler, working a five day week, working 8-hours a day, can provide about 800 cart tips per day. This number is dependent upon proximity to the landfill, proximity to the recycling sorting facility, distance between the home base and the various collection routes, weather, and experience of the driver. Typically, an experienced driver can increase productivity to an average of 1,000 cart tips per day within 6 to 12 months. Under optimal conditions, a driver can reach 1,200 to 1,300 cart tips per day.

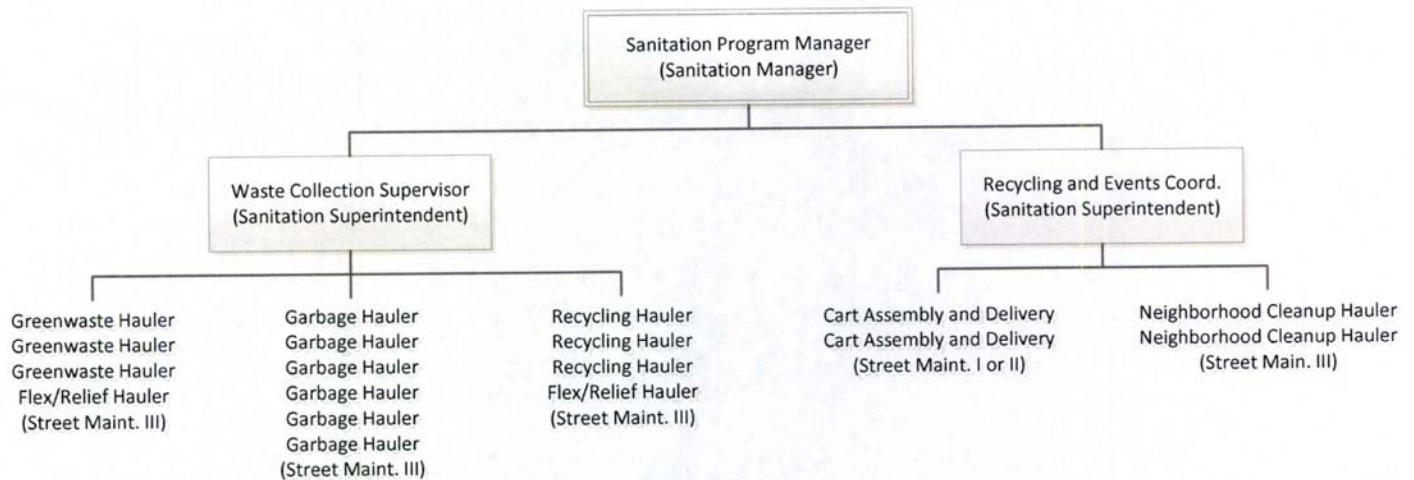
The City of West Jordan has just over 24,000 residential customers. Divided into five collection routes for each day of the workweek provides 4,800 customers per day. With a starting average of 800 cart tips per day, and assuming a 100% utilization of the garbage carts, it would take six drivers for garbage collection. It is found that West Jordan typically follows the national trend for recyclable and green waste utilization of 70% on an average week. Given the same number of customers, and that recycling collection trucks can carry more material due to weight, it would take eight drivers for recycling and green waste collection. This gives a total of 14 full-time collection drivers. A relief driver or two is necessary to handle sickness, vacations, or other unexpected instances, which can be incorporated as collection efficiency improves from 800 cart tips per day.

Neighborhood Cleanup program currently involves 32 roll-off bins that are collected every other day, meaning that 16 roll-off bins are picked-up or delivered on a given day. It takes on average, one-hour to pick-up, dump, and deliver a roll-off to a new residence. With an 8-hour day, the program as it currently stands can be handled with two roll-off drivers.

Services could be reduced to only collect recycling and green waste every other week on alternating weeks. This would reduce the need of four trucks and four drivers at an estimated annual cost savings of \$443,947.

Currently, there is no capacity to be able to park, fuel, and maintain the additional vehicles. The new public works facility, scheduled for completion in late 2017/early 2018 will have the capacity if the services are brought in-house.

A sample organization chart is provided below. Based upon the calculations, the City would require a total of 16 drivers, 2 superintendents, and a manager to supervise and manage the program (staff currently has the two members for cart replacement). Additionally, an additional fleet mechanic is proposed to handle the increased demand on the fleet staff. Waste trucks have a lot of moving parts and have a tendency to require above average maintenance from fleet.



Position Summary

Sanitation Manager – 1
 Sanitation Superintendent – 2
 Street Maint. Worker III – 16
 Street Maint. Worker II – 0
 Street Maint. Worker I – 2

Fleet Maintenance Worker – 1 Additional

Vehicle Summary

Auto Side Load Diesel Waste Truck – 15
 Front Load Diesel Waste Truck – 1
 Box Truck – Existing
 Roll-Off Truck – 2
 F-150 Pickup Truck – 3

Quantity	Position	Salary/Each	Total Salary	Benefit/Each	Total Benefits
1	Manager	\$ 65,561	\$ 65,561	\$ 26,224	\$ 26,224.40
2	Superintendent	\$ 59,384	\$ 118,768	\$ 23,754	\$ 47,507.20
16	Drivers	\$ 37,169	\$ 594,704	\$ 14,868	\$ 237,881.60
2	Cart Replacement	\$ 30,492	\$ 60,984	\$ 12,197	\$ 24,393.60
1	Fleet Mechanic	\$ 43,097	\$ 43,097	\$ 17,239	\$ 17,238.80
22	Total		\$ 883,114		\$ 353,246

\$ 1,236,360 Est. Total Salary & Benefits

\$ 60,000 Est. Overtime (i.e. holiday pay)

\$ 10,000 Uniform and Safety Equip.

Vehicles

It was determined that due to advances in diesel technologies, diesel fuel is cleaner, more fuel efficient, and currently less expensive in terms of vehicle needs when compared to CNG. CNG fuel technologies haven't changed since inception and have fallen behind diesel in several regards.



A typical waste hauling truck is made up of two components, the chassis and the body. Those two pieces are provided by different suppliers with Mack and Peterbilt as industry leaders in the chassis, and with the body: McNeilus, Labrie, Heil with a presence in Utah, along with others such as New Way and Wayne that are seeking to enter the Utah market.



An estimated cost for the additional vehicles that the City would need to provide the services are listed below:

Quantity	Type of Truck	Price/Truck	Total
15	Automatic Side Load Waste Truck	\$ 276,805	\$ 4,152,075
1	Front Load Waste Truck	\$ 258,430	\$ 258,430
2	Roll-off Truck	\$ 190,000	\$ 380,000
3	Supervisor Pick-up Trucks	\$ 30,345	\$ 91,035
21	Total		\$ 4,881,540

Note that industry recommends a relief truck for every five trucks in service. Given that we would be operating a new fleet, a single relief truck is proposed until efficiency improves and another truck can be moved to relief. Fifteen haul trucks are proposed, along with a front load truck to handle pick-up at city facilities or potential commercial/industrial customers, and two additional roll-off trucks.

Budget

Due to their cost, it is typical that garbage trucks are leased or financed over time, rather than paying for them with cash at one-time. With a total of \$4,881,540 for vehicles, it is estimated that they would be leased or financed over a five-year period with a 2.5% interest rate. The estimated life of a leased waste truck varies between five and seven years. Along with other costs that are either taken from the current budget or estimated based upon increased staffing/vehicles, we get an estimated budget cost for the following items:

\$ 1,039,608	Est. Annual Vehicle Cost if leased over 5 years (2.5% int rate)
\$ 25,000	Solid Waste ERP Software
\$ 787,852	Tipping Fees
\$ 25,000	Department Supplies
\$ 282,441	Interfund Charges
\$ 180,357	Direct Service Fee
\$ 150,000	Fleet O&M
\$ 180,000	Fuel
\$ 15,000	Education Materials
\$ 2,000	Training
\$ 237,620	Garbage Cans

Combining the staff costs, vehicles costs, and various other budgeted items, we get the estimated annual cost of running the entire program at **\$4,231,238**. This estimate is based upon a typical year. A contingency is expected at start-up to handle additional unexpected expenses.

Current Fiscal Year 2016/17 budget for the City of West Jordan is **\$4,705,727**.

This appears to be in-line considering that a combined \$2,737,153 is paid to ACE for collection of normal hauling and neighborhood cleanup. Additional consideration should be given to the fact that according to an ACE Disposal survey, the City pays an average of \$3.20 for first can costs, which is an indicator of total hauling costs. That price of \$3.20 is the lowest in the valley for contracted haulers and is 28% below the regional average for

contracted hauling. The City could expect to see those costs increase at a minimum of 15-20% at the next contract renewal period.

Note that the current Public Works facility does not have the fleet storage, maintenance, or fueling capabilities to be able to handle the program. Changes to the Public Works facility must occur before the City can take over the service.

4. SERVICE OPTIONS

The estimate of \$4,231,238 is based upon maintaining programs at the same levels as they currently stand. As mentioned earlier, there are a number of options that can be taken to further reduce costs depending on a variety of services changes.

1. Services could be reduced to only collect recycling and green waste every other week on alternating weeks. This would reduce the need of four trucks and four drivers to an estimated annual budget of \$3,787,291 or a **cost savings of \$443,947**. Draper has chosen to follow this method and despite several discussions to move to the "every service, every week" method, they have chosen to stay at the alternating service, every other week, and they feel it works well. This option could also be used if one of the two services were to be eliminated completely or adjusted so that one of the service, green waste or recycling, was moved to a fixed base, drop off location, rather than residential pick-up. Please note that this option cannot be combined with Option 4.
2. Currently the Neighborhood Cleanup program delivers 32 roll-off dumpsters to neighborhood residents for a 2-day period. Several other communities and residents have commented on the premium nature of this service. In February 2015, this service was adjusted to the number that is currently delivered. An option would be to reduce the number of roll off cans back to pre-2015 levels of 16 roll-offs, rather than 32. As previously discussed, it takes one driver and one trucks about an hour to service one roll-off, in an 8-hour day and with half of the roll-offs serviced each day, a reduction in the number of roll-off deliveries from 32 to 16 could result in a reduction in one driver and one truck handling the neighborhood clean-up program. This option alone would reduce the estimated annual budget to \$4,138,737, or a **cost savings of about \$92,501** per year.
3. Another option would be to modify the neighborhood clean-up program to move to fixed location areas. Rather than delivering dumpsters to individual residents,



the dumpsters would be located in pre-defined locations around the city. Specific dumpsters could still be delivered to residences, but at a charge of \$120-\$150 plus tipping fees to cover expenses. This model is currently used by Provo City. While it won't currently change the estimated budget, it does reduce pressure off of current staff, which currently spends an estimated 30% of their time in scheduling dumpsters, thereby reducing the potential need for future administrative help. This also has the potential to reduce certain contaminants and heavy load issues that the City currently faces, by requiring individuals to be able to move the materials to a fixed station. It does have other consequences and could lead to inappropriate dumping by non-residential customers and typically leads to scavengers. Scavengers, while they typically reduce the amount delivered to the landfill, often leave messes around the bin as they rummage through the material, and tends to affect neighborhood morale.

4. The final option would be to eliminate curb-side recycling pick up and then situate larger recycling bins in fixed drop-off locations around the city. This could be handled in two different manners: The first, by using several 15-yard bins at each location. The bins would include a lid and each bin would represent a particular product, like paper and cardboard, or plastic. By pre-sorting the materials it helps reduce risk of contamination and may increase financial yield of the materials at turn-in. These bins would be protected from weather conditions such as wind and rain and would discourage scavenging. This option should service up to a dozen drop off locations with one truck and driver. The other option would be to situate 30-yard roll-off bins for recycling, similar to Option 3. These bins would not be ideal, as wind and rain could scatter product or damage paper materials and would not provide any pre-sorting benefits. Using roll-off containers would allow for 8-10 drop off sites. By eliminating curb-side recycling, it would eliminate the need for four side-load waste trucks, but add in another front load truck. It would also eliminate the need for three drivers. If the 30-yard roll off is used, then instead of a front load truck, a roll-off truck would be used instead. If multiple 15-yard bins are used, the estimated annual budget would be reduced to \$3,894,372 or a **cost savings of \$336,866**. If roll-off containers are used the estimated budget would be \$3,879,792, or a **cost savings of \$351,446**. This option could not be combined with Option 1.

Through a variety of potential service changes, the City could experience further cost savings over the current situation.

5. RECOMMENDATION

It appears that the City of West Jordan could save money, improve efficiency, and enhance customer service by providing the hauling services traditionally handled by contract.

Submitted by



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Deputy Director of Public Works

Date 9/21/16